



FOR KIDS

Northern Harrier's Word Finder

*I am a harrier, a bird of prey.
Over these fields I glide and
hover.*

*Within the field of letters below,
Which living things can you
discover?*

D	C	R	A	G	O	H	A	U	Q
F	R	H	A	R	Z	B	Q	U	S
L	B	A	Y	B	E	R	R	Y	W
Y	M	R	G	G	B	S	X	B	I
C	P	R	F	O	E	L	R	U	T
A	S	I	L	L	N	P	Y	S	C
T	J	E	L	D	W	F	E	W	H
C	S	R	A	E	P	M	L	I	G
H	C	L	R	N	J	P	T	Y	R
E	Z	H	C	R	A	B	R	M	A
R	S	X	D	O	P	E	U	Z	S
X	O	Y	M	D	S	Z	T	P	S
M	A	L	C	L	A	T	O	M	N

The words are: **HARRIER, GOLDENROD, CLAM, QUAHOG, SHREW, BAYBERRY, DRAGONFLY, FLY-CATCHER, SWITCHGRASS, TURTLE, CRAB.**

All can be found at the Ninigret National Wildlife Refuge at various times of the year. Words are spelled forward, backward, up, down, and diagonally.

Ninigret National Wildlife Refuge

Trails Through Time: A Self-Guided Journey

What might first appear to be just native grasses and shrublands holds a rich diversity of forests, wetlands, kettle ponds, and a spectacular salt pond.

Ninigret National Wildlife Refuge's diverse habitats harbor millions of plants and animals—some of which are endangered. The U.S. Fish and Wildlife Service manages these habitats for the benefit of wildlife and visitors like you.

This brochure highlights the natural and cultural history of this refuge.

- ◆ See where native tribes lived.
- ◆ Hike on what was once a dairy farm that exported world-famous South County Cheese.
- ◆ Stand where World War II pilots practiced landing fighter planes at night.

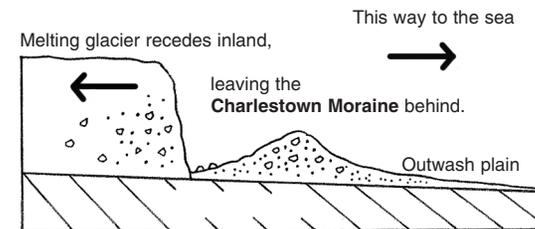
Inside, a map shows you where to find graphic panels with additional information.

A Brief History of Ninigret

Glaciers

If you were walking here **17,000 years ago** it would not be an easy hike. That's because an enormous ice sheet (a glacier) was slowly bulldozing, scraping, and gouging this landscape.

The glacier formed the 100-foot-high **Charlestown Moraine**, a ridge located several miles inland from the sea. The moraine formed as the melting glacier's leading edge acted as a conveyor belt, dumping glacial debris (rocks, gravel, and sand) called till.



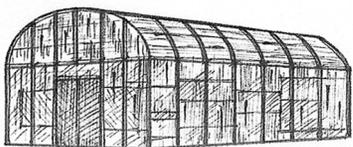
Streams from the melting glacier fanned out toward the sea. They deposited sand and gravel in an outwash plain.

Once, this flat plain was an ideal place for farmlands and runways. Today it is the setting for this parcel of land—the Ninigret National Wildlife Refuge—and its wildlife.



Tribal Arrival

About 9,000 years ago native people first arrived on the shores of the Ninigret Salt Pond. Here they gathered fish and shellfish. They grew corn, pumpkins, and other crops in the fertile soil.



Woodland Period longhouse

About 3,000 years ago, in warm seasons, Narragansett Indians lived along the Salt Pond. In winter they moved inland into the forest. There they built wood and bark “longhouses,” which protected them from icy winds and coastal storms

Farming

In the 1600s colonists first settled in Rhode Island on land used by native people. The colonists used it in various ways. The King of England granted a parcel of land “one mile wide, from Watchaug Pond to the ocean” to colonist Jeffrey Champlin. There, farmers planted corn, hunted for game, and fished in the ponds.

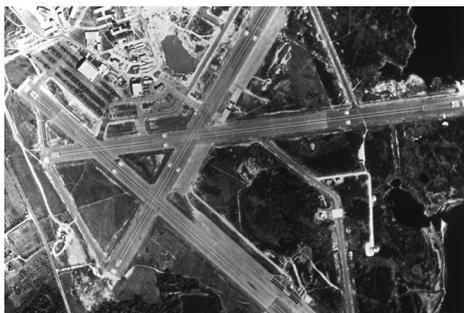
In the 1700s this parcel (now part of the Ninigret National Wildlife Refuge) became one of the largest and most successful plantations in Narragansett County.

Here, 200 slaves tended to more than 600 sheep, 50 dairy cows, and hundreds of pigs. Farmers replaced native grasses with hay. Exported ham, wool, and cheese provided most of the farmers’ income. South County Cheese became famous around the world.

In 1787 the Rhode Island General Assembly outlawed slavery in the state. With the decline of plantation life, small-scale farming continued here until the early 1940s.

War Heroes

In the early 1940s the U.S. Navy bought the land around Ninigret Salt Pond, including Hunter’s Harbor—a summer residential colony. They transformed the land into the top-secret Charlestown Naval Auxiliary Air Station.



Historical aerial view of the Air Station.

At the air station, pilots trained for World War II night-flying missions in the South Pacific. In bad weather and fog, training could be as risky as combat. Here, more than 60 brave pilots died in plane crashes.

Back to Nature

In 1979 the U.S. Fish and Wildlife Service acquired the air station and created the Ninigret National Wildlife Refuge. The Service replaced runways with native grasses, which in turn promoted the growth of native shrubs. This restored habitat provides cover for wildlife all year long.



The Service removed and recycled asphalt from 70 acres of old runways.

Today the Service continues to restore the refuge to its natural state. To maintain native grasses and shrublands, it conducts controlled burns, which help to minimize the growth of non-native invasive plant species.



Controlled burning promotes the regrowth of warm-season native grasses.

Meet some of our **wild** residents.

Northern Harrier

(R.I. state-Endangered species)

Circus cyaneus

Look for this raptor as it glides low over Ninigret's fields, hunting for rabbits and voles. Owl-like facial features direct sounds of scurrying prey to its ears.



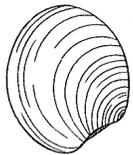
Because of environmental toxins and the loss of meadows and marshlands, populations of this species have declined.

Hard-shelled clam (Quahog, or Cohog)

Mercenaria mercenaria

People gather this tasty mollusk from Ninigret Salt Pond. Long ago, tribal people used beads

(wampum) as currency for trading with Europeans. Today New England tribes still fashion quahog shells into jewelry.



Masked Shrew

Sorex cinereus

This tiny forest insectivore feeds voraciously on insects, worms, and salamanders. With a high metabolism (up to 800 heartbeats per minute), it can eat the equivalent of twice its weight, or more, daily.

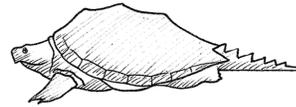


Snapping Turtle

Chelydra serpentina

With a shell as long as 18 inches, this reptile is Rhode Island's largest freshwater turtle. It

defends itself with its long neck and strong jaws. In water, where it tends to avoid people, it hunts fish and frogs. In spring, female snappers emerge to lay eggs on dry land around freshwater ponds and rivers.



Switchgrass

Panicum virgatum

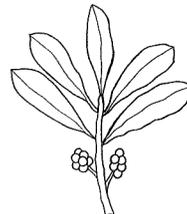
This tall perennial grass provides woodcocks and bobwhites with cover and tasty insects the grass harbors. When snow mats down other grasses, switchgrass stands tall and continues to shelter birds and mammals. The U.S. Fish and Wildlife Service spends time and money restoring switchgrass and other native warm-season grasses.



Northern Bayberry

Myrica pensylvanica

A fragrant coat of wax protects bayberries from drying winds and salt spray. The wax, which colonists used to make candles, serves as high-calorie fuel for migrating yellow-rumped warblers.



Rough-stemmed Goldenrod

Solidago rugosa

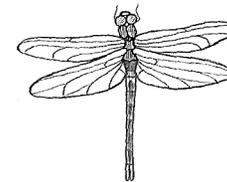
This yellow-flowered member of the daisy family (Compositae) grows to a height of 7 feet. Its deeply toothed leaves tend to appear wrinkled and "hairy."



Green Darner

Anax junius

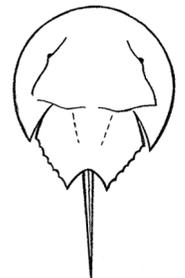
If you spot one of these dragonflies, say "thank you." This "mosquito hawk" catches and eats mosquitoes and other biting insects.



Horseshoe Crab

Limulus polyphemus

Not a true crab, this relative of spiders has remained largely unchanged for more than a hundred million years. Look for them in the shallows of the Salt Pond in warm seasons.



Willow Flycatcher

Empidonax traillii

This species nests in the shrubs and wetlands of this refuge. Its numbers have declined as people have developed wild habitats. Flycatchers feed on flying insects, seeds, and berries.



Trails Through Time Map

